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(54) Title: CAGED LIGANDS AND USES THEREOF

(57) Abstract: Provided are caged compounds comprising a ligand that specifically reacts with a receptor not naturally present in a cell. The cage is released from the ligand upon illumination of the compound with light. Also provided are cells transfected with a gene of interest and a gene encoding a receptor, the gene of interest operably linked to a genetic element capable of being induced by the receptor when bound to a ligand, and the receptor not naturally present in the species of the cell. The cells also comprise a caged ligand of the receptor. Additionally provided are methods of inducing a gene of interest in the above cells. Also provided are methods of repressing a gene of interest in a cell using caged ligands of receptors. Methods are additionally provided for inducing elimination of a target sequence in a cell of a species, using a caged ligand and a recombinase.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/33438

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 9/00; C12N 1/00,

US CL : 424/93.21, 400

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/93.21, 400

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,399,346 A (ANDERSON et al) 21 March 1995, see entire document.	1-143
A	US 6,242,188 B1 (DATTA GUPTA et al) 05 June 2001, see entire document.	1-143
A	US 6,258,603 B1 (CARLSON et al) 10 July 2001, see entire document.	1-143

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

22 August 2004 (22.08.2004)

Date of mailing of the international search report

22 SEP 2004

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INTERNATIONAL SEARCH REPORT

PCT/US03/33438

Continuation of B. FIELDS SEARCHED Item 3:

WEST: search terms: caged ligand, ecdysone receptor, steroid ligand, 20-hydroxyecdysone, ponasterone A, muristerone A, inokosterone, 3,5-di-tert-butyl-4-hydroxy-N-isobutyl-benzamide, dibenzoylhydrazine, nitromethoxybenzyl moiety, 1-methyl-4,5-dimethoxy-2-nitrobenzene